DECLARATION OF JAMES WILLIAM JONES, Ph.D.

I QUALIFICATIONS

1. My name is James William Jones. I am a consulting engineer and am employed by and sole owner of J. William Jones Consulting Engineers, Inc. (JWJCE, Inc.). I am presently under contract to ASME-Innovative Technologies, LLC, a non-profit corporation wholly owned by ASME (formerly known as the American Society of Mechanical Engineers). My title there is Chief Technology Officer-RAMCAP. In addition, I provide engineering services for a number of clients including ConocoPhillips, Kashar Technical Services and others. I have been a consulting engineer working in industry and government for more than thirty-five years. I am a mechanical engineer by training and experience. Attached, as Exhibit A, is a true and correct copy of my curriculum vitae (CV). Exhibit A accurately describes some of my training and experience in engineering. I hold a Ph.D. in Mechanical Engineering from the University of Pittsburgh; and a B.S. and M.S., also in mechanical engineering, from the University of Texas, Austin. I have personally designed scores of mechanical components for applications in practically all industry sectors including aircraft, automotive, biotechnology, consumer products, energy, and many economic sectors, some of which are listed in my CV. I have served as an expert witness in many cases including numerous patent disputes.

2. I have been informed that this Declaration will be submitted to the United States Patent and Trademark Office for its consideration in the evaluation of the patent application for Electric Deterrence Device, Cameron A. Riddell, described in United States Patent Application Publication, Pub. No.: US 2005/0132635 A1, Pub. Date June 23, 2005. I have also been informed that an applicant for patent has an uncompromising duty of candor to the United States Patent and Trademark Office, and that any false statement, material omission or other misleading statements made to the United States Patent and Trademark Office during its evaluation of the application could affect the validity and enforceability of any patent that might issue on that application. I have been informed that my Declaration will be held to the same standard.

3. I have no financial or other interest in the subject patent application or Bird Barrier America, Inc. I will not receive any benefit if a patent is or is not granted on that application. To the best of my present knowledge, information and belief, prior to being retained on this matter for the purposes of the work described in this Declaration, I had no relationship with Mr. Cameron Riddell, Bird Barrier America, Inc., or any attorney representing them in this matter. I am not aware of any future work for any of them.

II. PURPOSE OF WORK

The purpose of the work leading to this declaration is to evaluate and then provide an opinion comparing and contrasting the braided element used in the device that is the subject matter of

the Riddell patent application with a device that comprises a metal mesh that is sewn to a plastic or rubber-like substrate.

III. HARDWARE REVIEWED

The following items have been given to me to inspect and evaluate for the purposes of comparison:

a) An approximately eight inch long piece of a plastic or rubber-like material with two braided elements stitched to one surface. This sample appears to be essentially identical to the part shown in Figure 1 of the Riddell patent application. In this device, the braided conductive element comprises elongate strands of metal that are interwoven, rather than having perpendicularly arranged warp and weft strands that are affixed to one another. The sewing by which the braided conductive elements are attached to the rubber-like material consist of a single line of stitching down the approximate center of each of the braided elements. A photograph of this device is attached. I will refer to it as "the braided wire design."

b) Several wire mesh grids. The grids are formed in one sample by bending the wires into orthogonal intersections using a warp and weft pattern not unlike in a basket design. In the second sample, wires are arranged in an orthogonal pattern, intersecting at a perpendicular angle, and are fixed to each other by some type of welding or brazing method. In this second case, the wires are straight (unbent) and are arranged such that the "top" wires lie in one plane and the "bottom" wires lie in another plane. I was informed that these meshes were constructed of Monel metal, which is a metal that is often used in harsher environments, such as near the ocean. A photograph depicting these two mesh grids is also attached.

c) A third sample was provided to me to evaluate which consisted of a wire grid, which appears to have been cut from the first sample of mesh mentioned in the preceding paragraph, and sewn to a flexible plastic or rubber-like piece of material about nine inches long and one and one-half inches wide. In this device, the sewing consisted of a two lines of stitching down either side the attached mesh. A photograph of this device is attached. I will refer to it as "the mesh (or matrix) wire design."

IV. DOCUMENTS AND THINGS REVIEWED

In addition to the samples mentioned above, I have been provided with the following documents and devices:

a) United States Patent Application Publication No. 2005/0132635 A1
b) Published Patent Application by Bailey, WO1984004022A1
c) Samples of certain other electric bird or pest deterrent devices that I was informed have already been disclosed to the United States Patent and Trademark Office during the prosecution of the Riddell application.

d) The text of what I was informed are the now-amended Claims 1 and 16 of the Riddell application. That text is appended to the end of this Report.

V. EVALUATION OF THE BRAIDED WIRE DESIGN VS. THE MESH WIRE DESIGN

The braided wire design has a number of desirable properties for a bird or animal deterrent device as described in the Riddell patent application.

A list of just a few of the desirable properties for such a device are:

1. Flexibility - easily bent and formed to fit all contours. This includes bending as well as twisting capability

2. Good electrical conductibility

3. Elastic responsive to loads - no permanent set caused by local loads (due to bending, or twisting of the device, or due to walking, standing or heavy objects being dropped onto device)

4. Easily attached to elastomeric mounting surface

A brief description of how the braided wire design satisfies these requirements is provided below and the current solution is compared to the mesh wire design that I have examined or considered in my analysis.

1.0 FLEXIBILITY

The braided wire design is more flexible compared to the wire mesh or matrix design. There are a number of physics principles that can be cited to show that this is a basic characteristic of the design.

The braided wire design allows the elongate individual strands to slide relative to each other. The sliding effect can be demonstrated by opening a book when the pages are free to slide relative to each other. For example, a soft cover book is very flexible (a magazine can easily be rolled). However, when the pages cannot slide with respect to each other, for example if the magazine pages are glued together, the magazine becomes very rigid. The property that governs this phenomenon is known as the ***interlaminar shear strength*** of the structure. The flexibility of the braided wire design is, in part, due to lack of shear load transfer between layers. As explained above, the individual warp and weft strands of wire in the wire mesh design are substantially affixed to one another where they cross. Accordingly, this ability to slide relative to one another is not present in the wire mesh design.

Another example of how low interlaminar shear strength can change the rigidity of a device can be demonstrated by considering a simple paint brush. When the bristles of the brush are new and slippery, the brush bristles are very flexible even though hundreds or even

thousands of individual bristles are being bent at once. But if the user fails to clean the brush properly, the bristles stick together and a shear bond is formed. The bristles of a brush which contain dried paint are very stiff as most of us have learned when we do not clean our brushes properly.

The braided wire design allows the individual, flexible, wires to slide with respect to each other, resulting in a very flexible conductor. Mesh or matrix formed wires, either affixed to each other by welding, for example, or bent into a woven pattern, cannot slide upon themselves and thus are inherently more rigid.

In addition to the additional flexibility resulting from allowing the wires to slide with respect to each other, the braided wire conductors can also expand or contract width-wise. It can be demonstrated that when the braided wire design is formed into a radius with the braided wire on the outside, the braid will contract. When curved with the braided wire on the inside, the braid will expand. This effect greatly reduces the stiffness of the elastomeric-braided composite device. The single stitch, along the center line of the braided wire, which attaches the braided conductor to the elastomeric mounting strip, facilitates this expansion/contraction effect.

The rigid woven or welded matrix wire designs cannot exhibit these effects because the wires in the matrix are not allowed to slide or rotate with respect to each other. The braided wire design also allows for smaller diameter wires to be utilized without adversely affecting strength or electrical conductivity, and the smaller diameter wires also contribute to improved flexibility . Thus, devices comprised of elastomeric mounts and the fixed mesh or matrix wire type conductors will be much stiffer than the subject device.

2.0 ELECTRICAL CONDUCTIVITY

The braided wire conductor can be fabricated from any electrical conducting material that is capable of being formed into thin strands of wires. The great number of conductors (each elongate strand is a separate conductor) make the braided wire conductor highly redundant since the loss of an individual strand will not significantly reduce the conducting capability of the device or the effectiveness of performing the intended function.

Compared to mesh or matrix type design the braided strands are superior because of the number of individual conductors and redundancy. Further, the matrix type devices, whether welded or woven, will have only a few conductors that are continuous along the entire length of the strip. Specifically, when the continuous wires run in the lengthwise direction, the particular wires are not lengthwise current carriers. When the formed wire matrix is cut on a 45-degree angle, none of the wires are continuous along the entire length of the conductor. The current must be carried through the weld or contact points resulting in electrical resistance losses. If the wire matrix were cut on a 90-degree angle, only 1/2 of the wires would be continuous, and if cut on a 90-degree angle, the edge wires may fray over time. In the braided design, all of the stands are continuous, and there are no edge wires to fray over time.

3.0 ELASTIC RESPONSE TO LOADS

Because the individual elongate wires in the braided device can move relative to one another to partially absorb stress, this device can be severely bent without permanently deforming the wires. This feature is very important when installing the device onto curved and irregular shaped surfaces. The term *elastic response* means that the braided conductor will return to the original (straight) shape when the load or curvature is removed.

I was able to bend the braided wire device into a curvature less than 1-inch in radius, and when released, the elastic response in the braided design is to return to the original shape without signs of permanent deformation.

This feature is very useful when packaging, shipping and installing the device. The elastic response combined with the inherent flexibility is a great asset to the user.

The metal mesh device I evaluated does not exhibit the same elastic response feature.

4.0 EASILY ATTACHED TO ELASTOMERIC STRIP

Because the individual strands can move easily relative to one another such that there is a lack of shear transfer between the individual wires, the woven conductor can be easily sewn to the elastomeric base using a single stitch for each braided conductor. This method of attachment forms a strong bond between the two parts yet still allows for the sliding motion between the wires and lateral expansion and contraction that provides the benefits discussed above. In the wire mesh design, a single stitch down the center would hold the mesh, but would allow the mesh to curl up at the edges and perhaps become frayed over time. Also, because the braided element can use smaller diameter wires that can slide relative to one another, the stitching needle will not be prone to hit a wire and break either the wire or the needle, whereas in the wire mesh design, the individual wires would not move relative to one another such that if a needle hit a wire squarely during a commercial sewing operating, either that wire or the needle point might be broken. As mentioned above, broken wires in the wire mesh design might adversely affect its electrical conductivity.

VI. REFERENCE TO THE TEXT OF THE APPENDED CLAIMS

I note that the features of the braided wire design I've discussed above -- ability of the strands of the braided design to move relative to one another, the ability of the width of the braided elements to expand or contract under compression or extension stress, and the ability of the device to be bent significantly without detachment or permanent deformation -- are reflected in the text of appended Claim 1 and Claim 16:

> ". . . wherein when said base is bent in convex or concave flex the compression or extension stress placed on said braided elements is at least partially absorbed by individual strands expanding apart from, or contracting towards, other strands"

"... said braided elements attached to said spaced apart areas on said base by sewing in which said braided elements are securely attached to said base, but allow some of said individual strands within each said braided element to move as the base is flexed"

"... that the resultant combination of said extruded flexible base and said attached braided elements can be bent into a curvature radius of less than one inch without permanent deformation of either said base or said braided elements."

[Excerpts from Claim 1].

"... wherein when said base is bent in any direction, the stress placed on said conductive elements is at least partially absorbed by the width of said braid-like elements expanding or contracting as said individual strands move relative to one another."

"... such that the deterrent device can be bent into a curvature radius of less than one inch without permanent deformation of either said base or said braided elements."

[Excerpts from Claim 16].

VI. CONCLUSION

Based upon the above observations and reasoning it is my opinion that the braided conductor design provides the described advantages over the wire mesh design.

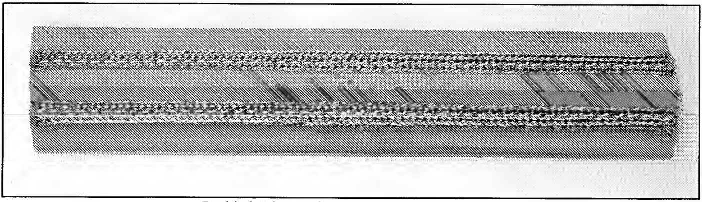
I hereby declare that all statements made herein of my own knowledge are true and that all statement made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statement and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such will false statements may jeopardize the validity of the application or any patent issued thereon.

Executed this 29th day of August, 2008, in Huntington Beach, California.

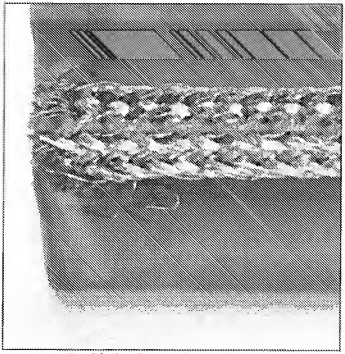
James Wm Jones

James William Jones, Ph.D.

Item III a) Braided Wire Design

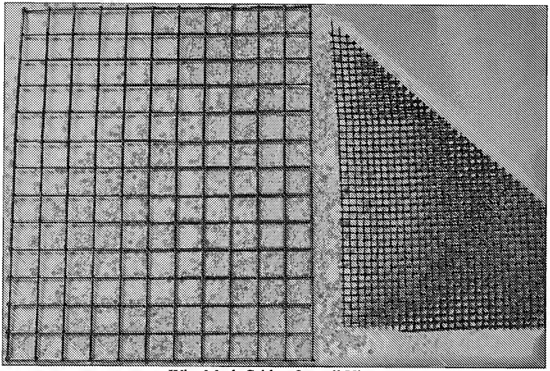


Braided Wire Design - Overall View



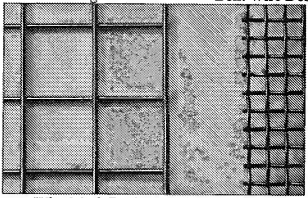
Braided Wire Design - Close up

Item III b) Wire Mesh Designs



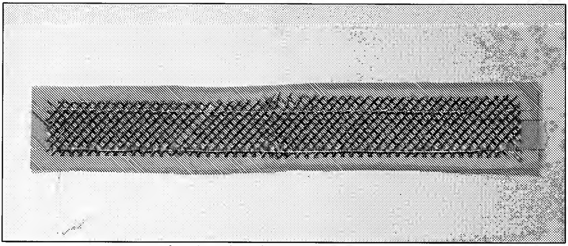
Wire Mesh Grids - Overall View

Welded Design Bent Wire Design

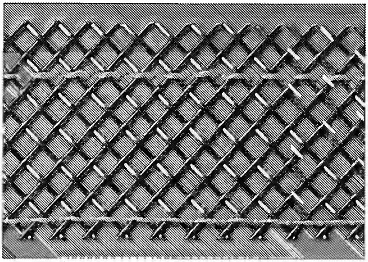


Wire Mesh Designs - Close Up View

Item III c) Mesh or Wire Matrix Design Attached to Flexible Material by Sewing



Mesh or Matrix Wire Design - Overall View



Mesh or Matrix Wire Design - Close Up View

Claim 1: An electric deterrent device for attachment to a surface comprising:

a) an elongate base constructed of an extruded, flexible, non-conductive plastic material, said base having a cross-sectional configuration that includes a first side that will at least in part lie against the surface, and a second side, opposite said first side, said second side having at least two spaced apart areas that are separated by a non-conductive area;

b) said base being attachable to either a flat or curved surface;

c) at least a pair of electricity conducting elements attached to said spaced apart areas of said base, each said element comprising three or more strands interwoven to form a braided element rather than a mesh comprised of warp and weft strands in perpendicular arrangement and rigidly attached to one another at the warp/weft intersections, wherein when said base is bent in convex or concave flex the compression or extension stress placed on said braided elements is at least partially absorbed by individual strands expanding apart from, or contracting towards, other strands;

d) said braided elements being attachable respectively to the positive and negative terminals of a power source; and

e) said braided elements are attached to said spaced apart areas on said base by sewing in which said braided elements are securely attached to said base, but allow some of said individual strands within each said braided element to move as the base is flexed, and that the resultant combination of said extruded flexible base and said attached braided elements can be bent into a curvature radius of less than one inch without permanent deformation of either said base or said braided elements.

Claim 16: In an electrical animal, pest or bird deterrent device comprising a base that is attachable to the surface from which the animal, pest or bird is to be deterred, and at least a pair of electrically conductive elements attached to the base and attachable to a power source, the improvement comprising said conductive elements comprising at least three individual strands woven together in a braid-like fashion rather than a mesh comprised of warp and weft strands in perpendicular arrangement rigidly attached at their warp/weft intersections, wherein when said base is bent in any direction, the stress placed on said conductive elements is at least partially absorbed by the width of said braid-like elements expanding or contracting as said individual strands move relative to one another, wherein said elements are

attached to spaced apart pedestal areas on said base by sewing such that the deterrent device can be bent into a curvature radius of less than one inch without permanent deformation of either said base or said braided elements.